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# The development of social and emotional abilities of primary school children

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**Abstract**

This paper aims to identify the progress of social and emotional abilities and resilience to a group of Romanian primary school children after attending the Program *Playing the Life.* The experimental study was made on 27 subjects in two stages, before and after the program, from children and teacher point of view. The main result refers to the increasing of social and emotional abilities (raw score, T score and category) and their factors (self-regulation, social competence, empathy and responsibility) from self-assessment of children and teachers assessment



***Keywords:*** social and emotional learning; self-regulation; social competence; empathy; responsibility; strengths-based assessment;

## 1. Introduction

Social and Emotional Learning (SEL) is a new issue in the sciences of education field and represents a reaction to challenges from social context regarding subjective children wellbeing. In the last decade there were developed many different social and emotional learning programs especially in the U.S. and U.K. These programs were sustained by scientific research which highlighted their key benefit: greater academic and professional success, behaviour improvement, increased inclusion, learning improvement, growth social cohesion and mental health improvement (Weare, 2003). An important meta-analysis found that students who received social and emotional learning had more positive attitude about school and improved an average of 11 percentile points on standardized achievement tests compared to students who did not receive such instruction (Durlak & Weissberg 2010, Durlak & Weissberg, 2011). The review

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indicates that SEL programs are effective in both school and after-school settings and for students with and without behavioural and emotional problems (Durlak, Weissberg, Pachan, 2010). School-based programs improve students' social-emotional abilities, attitudes about self and others, connection to school, and positive social behaviour and it reduces conduct problems and emotional distress. In conclusion, social and emotional abilities can be taught in school by teachers and in this form are most effective (Durlak & Weissberg, 2011, Merrell & Gueldner, 2010).

The experimental approach is based on the theory of positive psychology as it was initiated by Martin Seligman and Mihaly Csikszentmihalyi (2000) and the program evaluation is consistent with Strength-Based Assessment. According to this, the focus is on the positive attributes, assets and subjective wellbeing rather than deficits, pathology and mental illness (Cowen, Kilmer, 2002, Keyes 2002, Jimerson, Sharkey, Nyborg, Furlong, 2004, Keyes, Corey 2005, Suldo & Shaffer, 2008, Gilman, Huebner, Furlong, 2009, Bird, Markle, 2012).

Our study is included in wider range of researches concerning the SEL benefits and evidence-based programs. We aim to enrich the practical review of Strength-Based Assessment accomplished with children in after-school settings. We hope to validate the *Program Playing with Life* as developing the social and emotional abilities and resilience of primary school children. Social and emotional assets and resiliencies represent a set of adaptative characteristics that are important for success at school, with peers and in the outside world as follows: friendship skills, empathy, interpersonal skills, social support, problem solving, emotional competence, social maturity, self-concept, self-management, social independence, cognitive strategies (Merrell, 2011).

Resuming, the two goals of the study were as follows: 1) to validate the Program *Playing with Life* and its benefits for children; 2) to identify a progress in development of children's social and emotional abilities after program participation.

Having these goals in mind we propose one general hypothesis: *The proposed program has positive effects on the development of children's social and emotional abilities;* and three specific hypotheses: 1) The children's implication in the program will increase their level of social and emotional abilities from their self-assessment perspective; 2) The children's implication in the program will increase their level of social and emotional abilities from teachers' assessment perspective; 3) The children's implication in the program will increase their level of social and emotional abilities separately on each of the factors *self-regulation, social competence, empathy, responsibility* from teachers' assessment perspective.

The *independent* variable of this research was the educational program for the development of social and emotional abilities identified in two periods of time: before the intervention (pre-test) and after the intervention (post-test). The *dependent* variable – the global development level of social and emotional assets and resilience operationalized in several categories: self-regulation, social competence, empathy and responsibility.

## 2. Research Method

### *2.1. Participants*

The sample included 27 children aged between 8-12 years old from 6 urban public schools. Depending on the subject gender, there were 55% girls and 47% boys. All participants come from families with medium high standard of life and level of education, in a proportion of 22% disorganized by

divorce. The student attended the schools as follows: 26% in grade 2, 4% in grade 3, 41% in grade 4, 22% in grade 5, 7% in grade 6.

### *2.2. Assessment instruments*

The instrument used in assessment before and after the program is Social Emotional Assets and Resilience Scales (SEARS, Merrell, 2011). SEARS is a complex evaluation system of social, emotional and behavioural characteristics based on positive psychology and strengths assessment model. There are four primary rating scales within SEARS system, for children (ages 8 to 12 years), for adolescents (ages 13 to 18 years), for teachers (with students ages 5 to 18 years) and for parents (with children ages 5 to 18 years). The forms are short (ranging from 35 to 41 items) and each rating scale has o companion short form comprising 12 items that possess the strongest item-level psychometric properties. Each item has four-point ratings scale varying from 0=Never to 3=Always; higher score values (raw score, T score, percentile) are indicative of a child or adolescent possessing more of the desirable social-emotional characteristic. With exception of SEARS-Child (SEARS C) all other forms has four empirically derived scales: Self-Regulation (SR), Social Competence (SC), Empathy (E) and Responsibility (R). After summing the values can be calculated total raw score, T score, percentile and tier that corresponds to the examinee's total raw score. A profile for each subject can be constructed and after this the values are integrated in a category: Tier 1 *Average to High Functioning,* Tier 2 *At Risk,* and Tier 3 *High Risk.* The author mentioned in Professional Manual that internal consistency for the total score of each of the four SEARS measure range from.80 to.95 whilst the scale score internal consistency coefficients range from .80 to .95 and for short form is between .82 and .93.

### *2.3. Procedure*

The experiment was a longitudinal one with repeated measures, developed between December 2011 and March 2012 through children assessment with SEARS C and SEARS T (2 teachers). The answers from full forms where then taken over in short forms in order to obtain different types of integrated and progress monitoring reports for every child. The *Playing Life* Program developed in 8 modules made up of 2 weekly themes each; every theme took 2 hours.

The first phase was *The Initial Evaluation* of children social-emotional assets by self-assessment and 2 teachers assessment and the second was *The Final Evaluation* held with the same group of children in the same conditions. The third phase consists in uploading the values from scoring sheet to computer program (SEARS Scoring Program) in order to calculate the total raw score, the T score, percentile and place the children in the proper tier. In this moment the researcher also constructed a SEARS individual profile of each subject and also generates The SEARS Integrated Report (with protocols from children and teachers) and SEARS Progress Monitoring Report (with short form protocols pre-test and post-test separately for children and teachers). In the fourth phase the overall data for each subject were selected and then transferred to SPSS for processing. In the fifth phase there were made the statistical operation in order to check the hypotheses and it was done the qualitative interpretation.

## 3. Results

The data were processed with the program SPSS 10.0 for Windows. We used the following main statistical operation:

a) The Paired Sample t test in order to compare the raw score and T score at variables *social and emotional abilities* and their factors depending on the variable *testing moment*
b) The cross-tabulation technique in order to compare the categories of variables *social and emotional abilities* and their factors depending on the variable *testing moment*

To check the hypotheses we made comparison between initial and final evaluation (pre-test and post-test) for variables *social and emotional abilities* and their factors (*self-regulation, social competence, empathy and responsibility*) taking into account three types of measures (raw score, T score and category) achieved from two perspectives: children's self-assessment and teacher's assessment. We present below the obtained results for each of the three specific hypotheses.

### *3.1. The specific hypothesis 1*

#### *3.1.1. Comparisons regarding global children's self-assessment – social and emotional abilities (raw scores, T scores) before and after the program*

Sustained by the obtained results, we consider that:

- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *social and emotional abilities (children's self-assessment)* measured pre-test and post-test [t (26) = 7.344, p = 0.000], the participation at the program directing to a significant increase of raw scores at variable *social and emotional abilities (children's self-assessment*), (Table 1).
- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *social and emotional abilities (children's self-assessment)* measured pre-test and post-test [t (26) = 7.485, p = 0.000], the participation at the program directing to a significant increase of T scores at variable *social and emotional abilities (children's self-assessment*), (Table 1).

Table1. Means and results at t test of means comparison at variables raw score and T score of *social and emotional abilities (children's self-assessment*) before and after the program

| Variables | Means | Results at t test of means comparison |
|---|---|---|
| Raw scores *social and emotional abilities (children's self-assessment*) | | |
| Before the program | 47.07 | t (26) = 7.344 |
| After the program | 64.59 | p = 0.000 |
| T scores *social and emotional abilities (children's self-assessment*) | | |
| Before the program | 37.51 | t(26) = 7.485 |
| After the program | *48.37* | p = 0.000 |

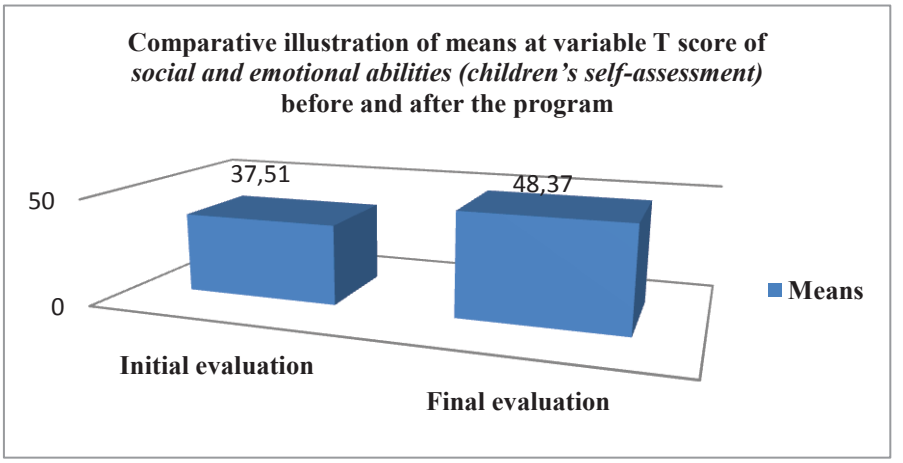


Figure 1. Comparative illustration of means at variable T score of *social and emotional abilities (children's self-assessment)* before and after the program

### *3.1.2. The category comparison at social and emotional abilities (children's self-assessment) before and after the program*

We used the cross-tabulation technique to check this comparison. The results are presented in Table no.2. We notice that before the program, 6 children were placed in *High Risk* Tier, 16 were placed in *At Risk* Tier and 5 were placed in *Average to High Functioning* Tier. After the program no child was placed in *High Risk* Tier, 5 were placed in *At Risk* Tier and 22 were placed in *Average to High Functioning* Tier. We observe that the participation in the program make that children be placed in superior categories regarding the social and emotional abilities and also no one in *High Risk* Tier 3.

Table 2. The categories crossover regarding *social and emotional abilities* level *(children's self-assessment*), before and after the program.

| | Total category initial assessment (children's self-assessment) | | | |
|---|---|---|---|---|
| | Average to High Functioning | At risk | High risk | Total line |
| Total category children initial assessment (self-assessment) | | | | |
| Average to High Functioning | 5 | 13 | 4 | 22 |
| At risk | 0 | 3 | 2 | 5 |
| High risk | 0 | 0 | 0 | 0 |
| Total column | 5 | 16 | 6 | 27 |

### *3.2. The specific hypothesis 2*

### *3.2.1. Comparisons regarding global teachers' assessments – social and emotional abilities (raw scores, T scores) before and after the program*

Sustained by the obtained results, we consider that:

- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *social and emotional abilities (teachers' assessments)* measured pre-test and post-test [$t(26) = 22.287$, $p = 0.000$], the participation at the program directing to a significant increase of raw scores at variable *social and emotional abilities (teachers' assessments)*, (Table 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *social and emotional abilities (teachers' assessments)* measured pre-test and post-test [$t(26) = 22.745$, $p = 0.000$], the participation at the program directing to a significant increase of T scores at variable *social and emotional abilities (teachers' assessments)*, (Table 3, Figure 2).

Table 3. Means and results at t test of means comparison at variables raw score and T score of *social and emotional abilities (teachers' assessment*) before and after the program

| Variables | Means | Results at t test of means comparison |
|---|---|---|
| Raw scores social and emotional abilities (teachers' assessment) | | |
| Before the program | 55.88 | $t(26) = 22.287$ |
| After the program | 76.81 | $p = 0.000$ |
| T scores social and emotional abilities (teachers' assessment) | | |
| Before the program | 44.51 | $t(26) = 22.745$ |
| After the program | 52.68 | $p = 0.000$ |

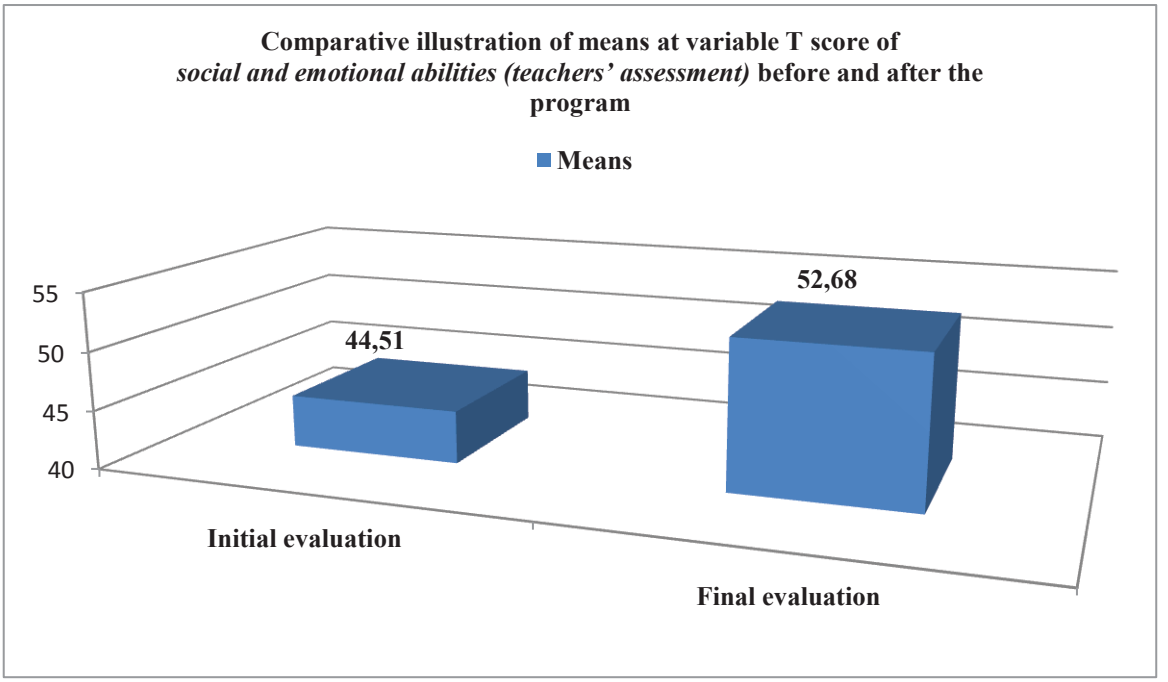


Figure 2. Comparative illustration of means at variable T score of *social and emotional abilities (teachers' assessment)* before and after the program

### *3.2.2. The category comparison at social and emotional abilities (teacher A and teacher B assessments) before and after the program*

We used the cross-tabulation technique to check this comparison. The results are presented in Table no. 4 and Table no.5. We notice that in teacher A assessments before the program, 6 children were placed in Tier *At Risk* and 21 were placed in Tier *Average to High Functioning.* After the program 1 child was placed in Tier *At Risk* and 26 were placed in Tier *Average to High Functioning*. We observe that participation in the program makes children be placed in superior categories regarding the social and emotional abilities, 5 out of 6 children initially placed in Tier *At Risk,* passed in Tier *Average to High Functioning* after the program and also no one is in Tier 3 *High Risk* (Table 4).

Table 4. The categories crossover regarding *social and emotional abilities level (teacher A assessment*) before and after the program.

| | Total categories initial assessment (teacher A assessment) | | | |
|---|---|---|---|---|
| | Average to High Functioning | At risk | High risk | Total line |
| Total categories initial assessment (teacher A assessment) | | | | |
| Average to High Functioning | 21 | 5 | 0 | 26 |
| At risk | 0 | 1 | 0 | 1 |
| High risk | 0 | 0 | 0 | 0 |
| Total column | 21 | 6 | 0 | 27 |

Concerning the Teacher B assessments of social and emotional abilities, before the program 4 children were placed in Tier *At Risk* and 23 were placed in Tier *Average to High Functioning.* After the program no child was placed in Tier *At Risk,* all 27 children being placed in Tier *Average to High Functioning.* We observe that participation in the program make that children be placed in superior categories regarding the social and emotional abilities, all 4 children found initially in Tier *At Risk* has moved after the program in the top Tier *Average to High Functioning* (Table 5).

Table 5. The categories crossover regarding *social and emotional abilities* level *(teacher B assessment*) before and after the program

| | Total categories initial assessment (teacher A assessment) | | | |
|---|---|---|---|---|
| | Average to High Functioning | At risk | High risk | Total line |
| Total categories initial assessment (teacher B assessment) | | | | |
| Average to High Functioning | 23 | 4 | 0 | 27 |
| At risk | 0 | 0 | 0 | 0 |
| High risk | 0 | 0 | 0 | 0 |
| Total column | 23 | 4 | 0 | 27 |

The same progression tendency was discovered from category comparison for both teachers (A and B) at all dimensions of social and emotional assets (*self-regulation, social competence, empathy and responsibility*) accomplished before and after the program.

### *3.3. The specific hypothesis 3*

#### *3.3.1. The comparisons of raw scores, T scores (teachers' assessments) of every factor of social and emotional abilities - self-regulation, social competence, empathy and responsibility - before and after the program*

Sustained by the obtained results, we consider that:

- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *self-regulation (teachers' assessments)* measured pre-test and post-test [$t(26) = 9.598$, $p = 0.000$], the participation at the program directing to a significant increase of raw scores at variable *self-regulation (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *self-regulation (teachers' assessments)* measured pre-test and post-test [$t(26) = 25.360$, $p = 0.000$], the participation at the program directing to a significant increase of T scores at variable *self-regulation (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *social competence (teachers' assessments)* measured pre-test and post-test [$t(26) = 16.015$, $p = 0.000$], the participation at the program directing to a significant increase of raw scores at variable *social competence (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *social competence (teachers' assessments)* measured pre-test and post-test [$t(26) = 12.848$, $p = 0.000$], the participation at the program directing to a significant increase of T scores at variable *social competence (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *empathy (teachers' assessments)* measured pre-test and post-test [$t(26) = 14.141$, $p = 0.000$], the participation at the program directing to a significant increase of raw scores at variable *empathy (teachers' assessments)*, (Figure 3).

- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *empathy (teachers' assessments)* measured pre-test and post-test [t (26) = 19.023, p = 0.000], the participation at the program directing to a significant increase of T scores at variable *empathy (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the raw scores at variable *responsibility (teachers' assessments)* measured pre-test and post-test [t (26) = 14.905, p = 0.000], the participation at the program directing to a significant increase of raw scores at variable *responsibility (teachers' assessments)*, (Figure 3).
- There were significant differences on the significance threshold $p \leq 0.05$ between the T scores at variable *responsibility (teachers' assessments)* measured pre-test and post-test [t (26) = 14.610, p = 0.000], the participation at the program directing to a significant increase of T scores at variable *responsibility (teachers' assessments)*, (Figure 3).

In order to facilitate the understanding we present a global graph comparative for T scores means at variables *social and emotional abilities, self-regulation, social competence, empathy and responsibility* (teachers' assessment) before and after the educational intervention.

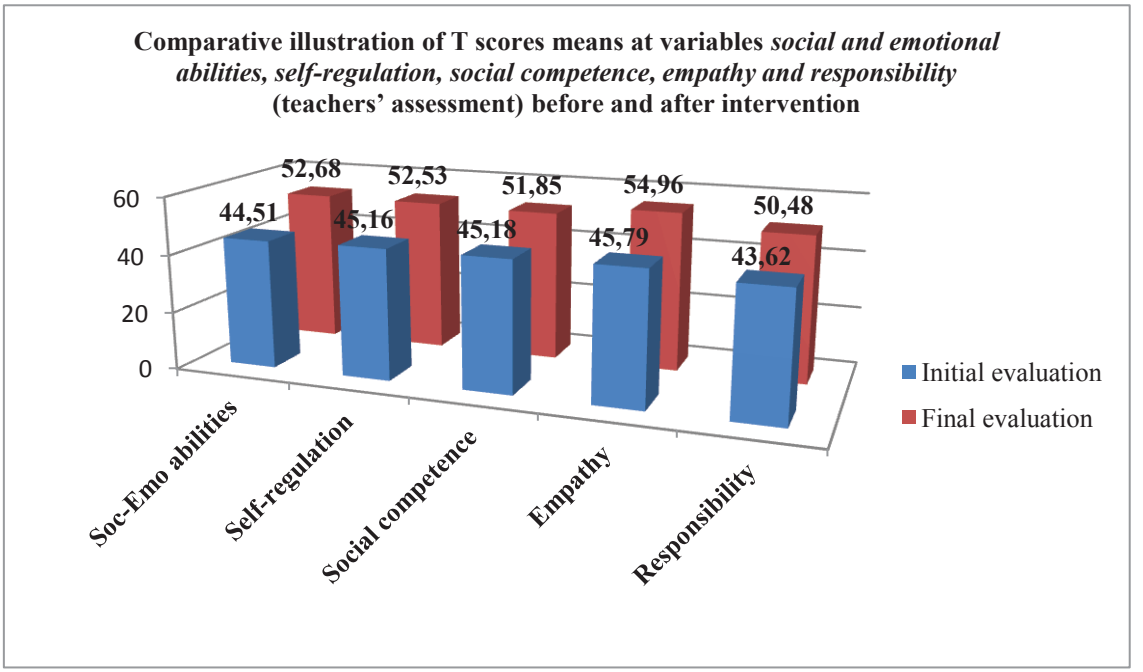


Figure 3. Comparative illustration of T scores means at variables *social and emotional abilities, self-regulation, social competence, empathy and responsibility* (teachers' assessment) before and after intervention

## 4. Discussion and conclusions

The general hypothesis showed how children's participation in a social and emotional learning program helps to increase social and emotional abilities. The social and emotional skills level was established from two perspectives, one of children's self-assessments and the second of two teachers who worked in teams to run the program. We considered three types of measurements: raw score, T score and the development category of social and emotional abilities. Moreover, if students did an overall assessment of skills, the teachers also took into consideration the 4 scales of SEARS: self-regulation, social competence, empathy and responsibility. In all experimental conditions (different assessors, at different times of testing, different types of measurements, different scales) there were recorded increases in levels of social and emotional abilities statistically significant at threshold $p \leq 0.05$. These findings based on scientific evidence are of outstanding importance in terms of teaching since it shows that socio-emotional development of children can be influenced in a constructive manner through consistent and systematic educational programs and it is not only a duty of family or wider social context. This means that the social-emotional skills development (vital for a balanced functioning of the individual and for an optimal social integration) best be addressed in the school curriculum under the guidance of competent teachers and with adequate teaching resources. Although socio-emotional aspects of child development have been neglected for various reasons (difficult to quantify, superfluous values, variability and complexity of mental phenomena, or the pathological view or the perspective of natural development, by imitation, without the need for systematic intervention), this research is in line with Anglo-Saxon extensive studies. These studies show that social-emotional skills can be effectively increased through school and after-school programs. A relevant fact is that the increasing of children's socio-emotional skills and resilience produced regardless of the level where they were at the beginning of the program.

Apart from the obvious improvement in the level of socio-emotional skills and resilience of children, this approach opens two perspectives: the first refers to skills rising of children with normal development, and the second to the increase of the level of children who already manifested behavioural/emotional problems or had a degree of vulnerability to later manifestation. This is a harmonious union of the benefits of social and emotional learning programs for children between the *preventive* character for those with average to high functioning and the *interventionist* character for children at risk for serious deficits in social skills or emotional problems. This opens the way for the unification of all preventive initiatives from school (regardless of their purpose or theme addressed), and for the broad addressability of different categories of children (regardless of the initial level of social and emotional abilities). This finding is supported by the statistical confirmation of the hypotheses and the individual profiles/monitoring reports of children's progress. However, this increase is limited by the participants' number in the experiment and could be continued through the hypotheses confirmation for nationally representative samples. Likewise, this increase is valid for trained educators to address social and emotional learning curriculum, for a previous pilot program, for appropriate resources and active inclusive strategies, for team teaching and for various grouping ways of students. The difficulty, but at the same time, the merit of the study were marked by the absence of running on a large scale (e.g., in schools) of such programs to allow access to a large group of subjects and the researcher to be released by additional responsibility of organizing the program implementation. Despite the limitation due to the number of participants we believe that investigative study is among the first steps to integrate the social and emotional learning in the Romanian educational system based on scientific evidences.

In conclusion, the results confirm the hypothesis launched. Thus, application of the intervention program helps children to develop social and emotional abilities and their factors: self-regulation, social competence, empathy and responsibility. Also it was found that the program intervention makes that student to be placed in top categories regarding their social and emotional abilities. The full confirmation

of hypotheses (from all perspectives of measurement) gives confidence to practitioners to design and implement social and emotional learning programs and support for decision-makers to introduce it in the curriculum. However, experimental research is in line with global scientific research, bringing evidence to support the idea that social and emotional skills can be developed through educational programs in the Romanian context.

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